AMENDMENT NO. 1 APRIL 2016
TO
IS 875 (PART 3) : 2015 DESIGN LOADS (OTHER THAN EARTHQUAKE) FOR BUILDINGS AND STRUCTURES — CODE OF PRACTICE

PART 3 WIND LOADS

(*Third Revision*)

(*Second cover page*, *Foreword*, *para* 6, *line* 1) — Substitute 'discipline' *for* 'descriptive'.

(*Second cover page*, *Foreword*, *para* 6, (c)) — Substitute 'k_2' *for* 'k$_2$'.

(*Third cover page*, *Foreword*, *para after* (j), *line* 8) — Insert 'anemometer' after 'with the help of'.

(*Page* 2, *clause* **3.1**) — Substitute 'C_f' *for* 'C_{fd}'.

(*Page* 3, *Symbol r*) — Insert ', $I_{h,i}$' after 'height h'.

(*Page* 3) — Substitute '$\bar{V}_{z,d}$' *for* '$\bar{V}_{d,z}$'.

(*Page* 6, *Fig.* 1) — Insert the following notes at the end of the figure.

'NOTES

1 The occurrence of a tornado is possible in virtually any part of India. They are particularly more severe in the northern parts of India. The recorded number of these tornados is too small to assign any frequency. The devastation caused by a tornado is due to exceptionally high winds about its periphery, and the sudden reduction in atmospheric pressure at its centre, resulting in an explosive outward pressure on the elements of the structure. The regional basic wind speeds do not include any specific allowance for tornados. It is not the usual practice to allow for the effect of tornados unless special requirements are called for as in the case of important structures such as, nuclear power reactors and satellite communication towers.

2 The total number of cyclonic storms that have struck different sections of east and west coasts are included in Fig. 1, based on available records for the period from 1877 to 1982. The figures above the line (between the stations) indicate the total number of severe cyclonic storms with or without a core of hurricane winds (speeds above 87 km/h) and the figures in the brackets below the lines indicate the total number of cyclonic storms. These have been included only as additional information.'

(*Page* 10, *Table* 4, [*]) — Substitute the following for the existing: '[*]Linear interpolation for intermediate values of A is permitted.'.

(*Page* 11, *clause* **7.3.3.3**, *para* 2) — Substitute 'The solidity ratio Φ' *for* 'The solidity ratio f'.

(*Page* 11, *clause* **7.3.3.3**, *para* 2, *lines* 3, 5 *and* 10) — Substitute 'Φ' *for* 'f'.

[*Page* 12, *Fig.* 2(b), *Right-topmost figure*] — Substitute the existing figure with the figure below:
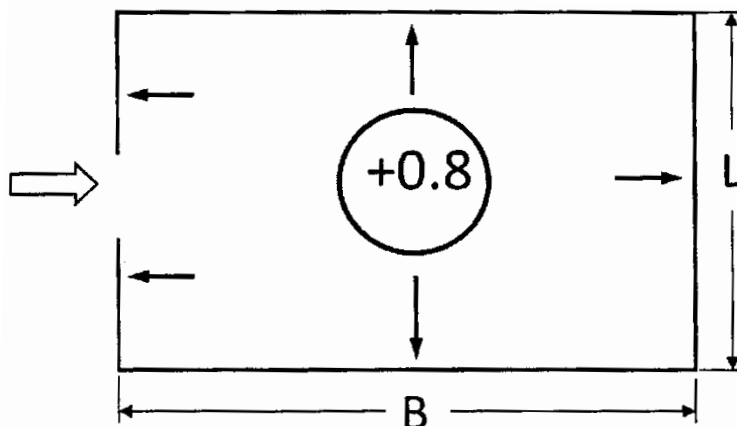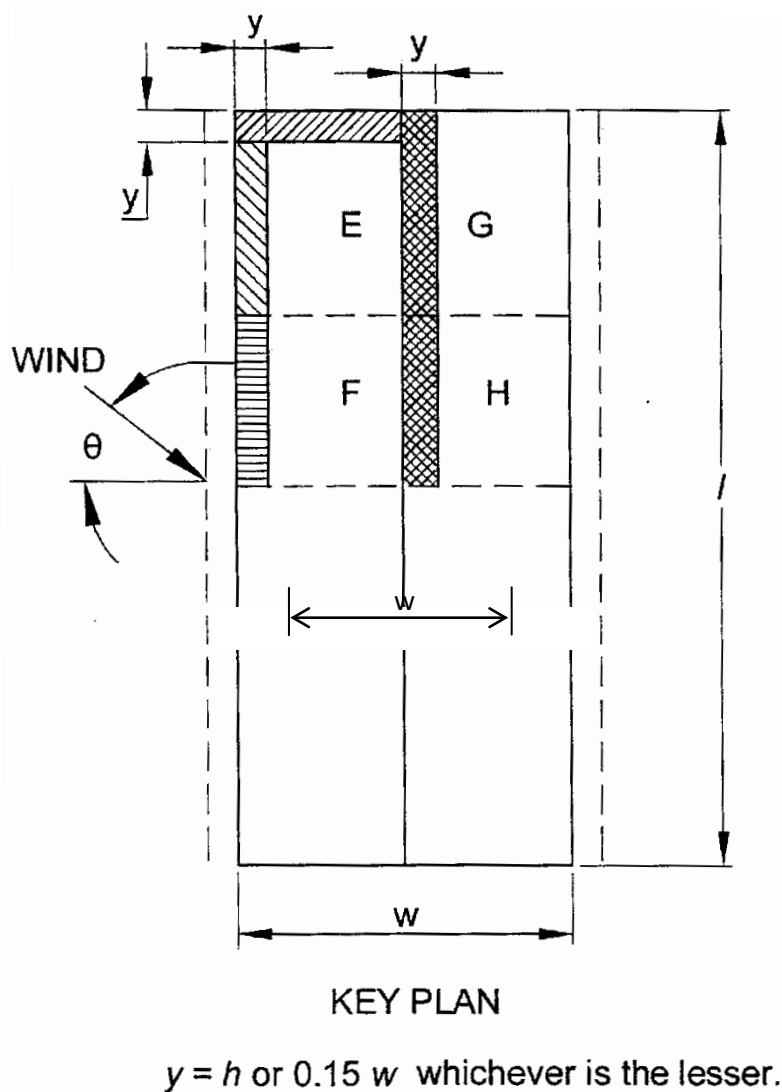

Price Group 4

(*Page* 13, *Table* 5, first row under BUILDING HEIGHT RATIO $\frac{1}{2} < \frac{h}{w} \leq \frac{3}{2}$) — Substitute '$1 < \frac{l}{w} \leq \frac{3}{2}$'

for '$1 \leq \frac{l}{w} \leq \frac{3}{2}$'.

(*Page* 13, *Table* 5, second row under BUILDING HEIGHT RATIO $\frac{1}{2} < \frac{h}{w} \leq \frac{3}{2}$) — Substitute '

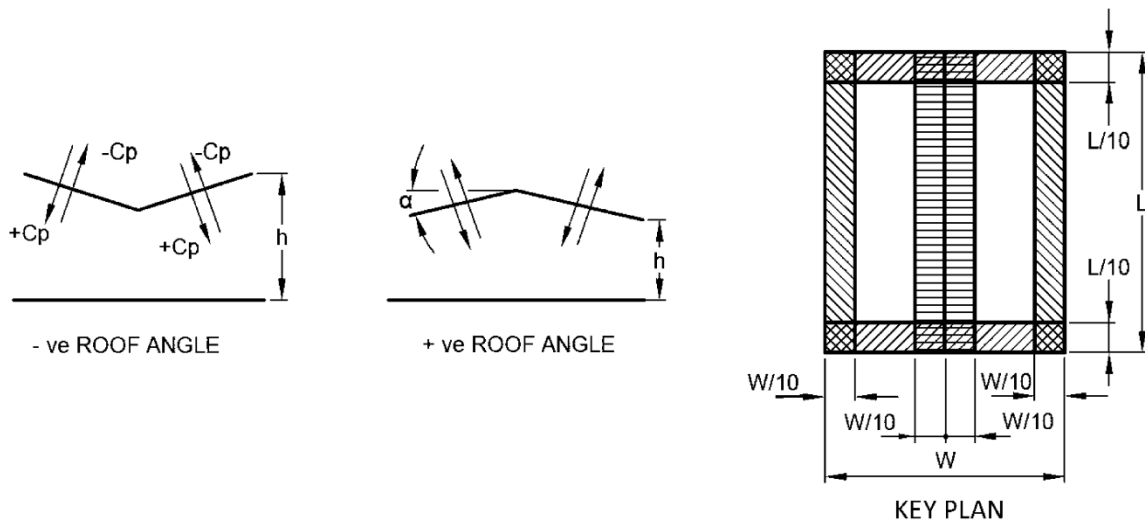$\frac{3}{2} < \frac{l}{w} < 4$' *for* '$\frac{3}{2} \leq \frac{l}{w} < 4$'.

(*Page* 14, *Table* 6, *bottommost figure*) — Substitute the following figure for the existing:

KEY PLAN

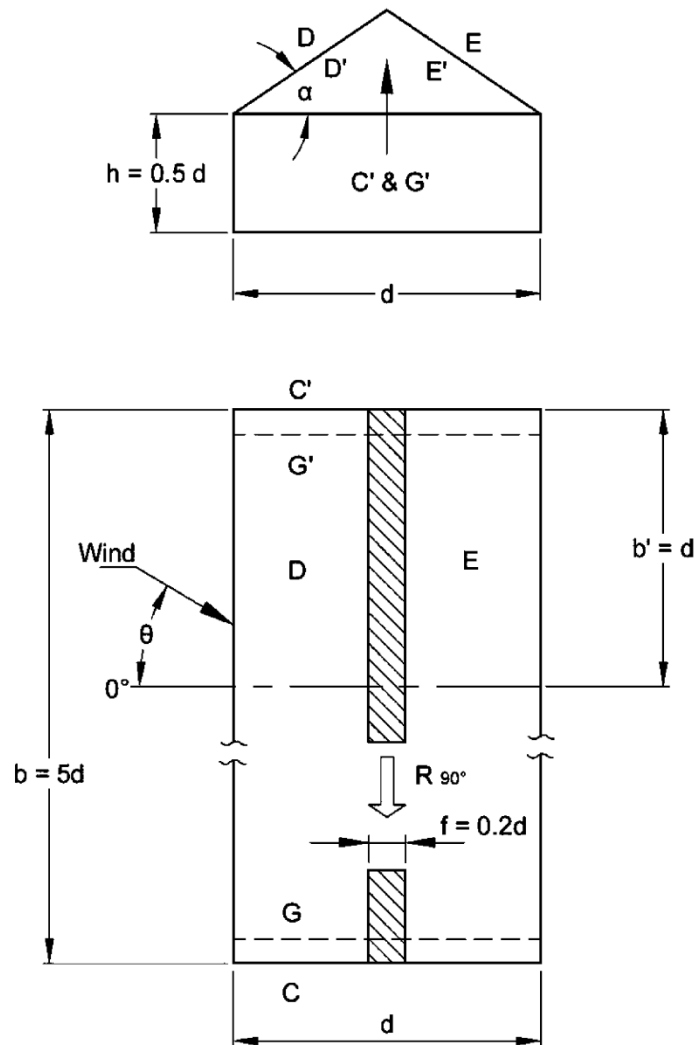*y = h* or 0.15 *w* whichever is the lesser.

(*Page* 17, *Table* 8) — Insert ', α' after 'ROOF ANGLE'.

(*Page* 17, *Table* 8, *Note* 2) — Substitute 'overhangs.' *for* 'overhangs,'.

(*Page* 18, *Table* 9) — Substitute the following figures for the existing:

- ve ROOF ANGLE   + ve ROOF ANGLE

KEY PLAN

(*Page* 19, *Table* 10) — Substitute the following figures for the existing:

(*Page* 19, *Table* 10) — Substitute the following for the existing table below figure:

3

θ	PRESSURE COEFFICIENTS, C_p							
	D	D'	E	E'	END SURFACES			
					C	C'	G	G'
0°	+0.6	-1.0	-0.5	-0.9				
45°	+0.1	-0.3	-0.6	-0.3				
90°	-0.3	-0.4	-0.3	-0.4	-0.3	+0.8	+0.3	-0.4
FOR ALL VALUE OF θ	FOR J : C_pTop = 1.0, $C_p$bottom = -0.2 Tangentially acting friction : $R_{90°} = 0.05\ p_d bd$							

(*Page* 20, *Table* 11) — Substitute the following for the existing table below figure:

θ	PRESSURE COEFFICIENTS, C_p							
	D	D'	E	E'	END SURFACES			
					C	C'	G	G'
0°	+0.1	+0.8	-0.7	+0.9				
45°	-0.1	+0.5	-0.8	+0.5				
90°	-0.4	-0.5	-0.4	-0.5	-0.3	+0.6	+0.3	-0.4
180°	-0.3	-0.6	+0.4	-0.6				
FOR ALL VALUE OF θ	FOR J : C_pTop = -1.5, $C_p$bottom = 0.5 Tangentially acting friction : $R_{90°} = 0.05\ p_d bd$							

(*Page* 21, *Table* 12, *below figure, line* 3) — Substitute 'θ = 90°' *for* 'θ = θ0°'.

(*Page* 21, *Table* 12) — Substitute the following for the existing table below figure:

θ	PRESSURE COEFFICIENTS, C_p							
	D	D'	E	E'	END SURFACES			
					C	C'	G	G'
0°	-1.0	+0.3	-0.5	+0.2				
45°	-0.3	+0.1	-0.3	+0.1				
90°	-0.3	0	-0.3	0	-0.4	+0.8	+0.3	-0.6
FOR ALL VALUE OF θ	FOR f : C_pTop = -1.0, $C_p$bottom = 0.4 Tangentially acting friction : $R_{90°} = 0.1\ p_d bd$							

(*Page* 22, *Table* 13, *top figure*) — Substitute 'h′=0.8h' *for* 'h′=0.θh'.

(*Page* 22, *Table* 13) — Substitute the following for the existing table below figure:

θ	PRESSURE COEFFICIENTS, C_p							
	D	*D'*	*E*	*E'*	END SURFACES			
					C	*C'*	*G*	*G'*
0°	-1.3	+0.8	-0.6	0.7				
45°	-0.5	+0.4	-0.3	+0.3				
90°	-0.3	0	-0.3	0	-0.4	+0.8	+0.3	-0.6
180°	-0.4	-0.3	-0.6	-0.3				
FOR ALL VALUE OF θ	FOR *f* : C_pTop = -1.6, $C_p$bottom = -0.9 Tangentially acting friction : $R_{90°}$ = 0.1 $p_d bd$							

(*Page* 23, *Table* 14, top figure) — Delete '(x)'.

(*Page* 24, *Table* 15) — Delete '(x)'.

(*Page* 24, *Table* 15, bottom) — Substitute 'Tangentially' *for* 'Tengentially'.

(*Page* 26, *Table* 17, bottom) — Substitute the following for the existing entry:

270	Similar to 90°, h_1, h_2, h_3 are needed to be reckoned from the windward edge in the same order

(*Page* 27, *Table* 18) — Substitute the following for the existing table:

Table 18 External Pressure Coefficients (C$_{pe}$) for Curved Roofs
(*Clause* 7.3.3.6)

a) ROOF SPRINGING FROM GROUND LEVEL

b) ROOF ON ELEVATED STRUCTURE

c) DOUBLE CURVED ROOFS
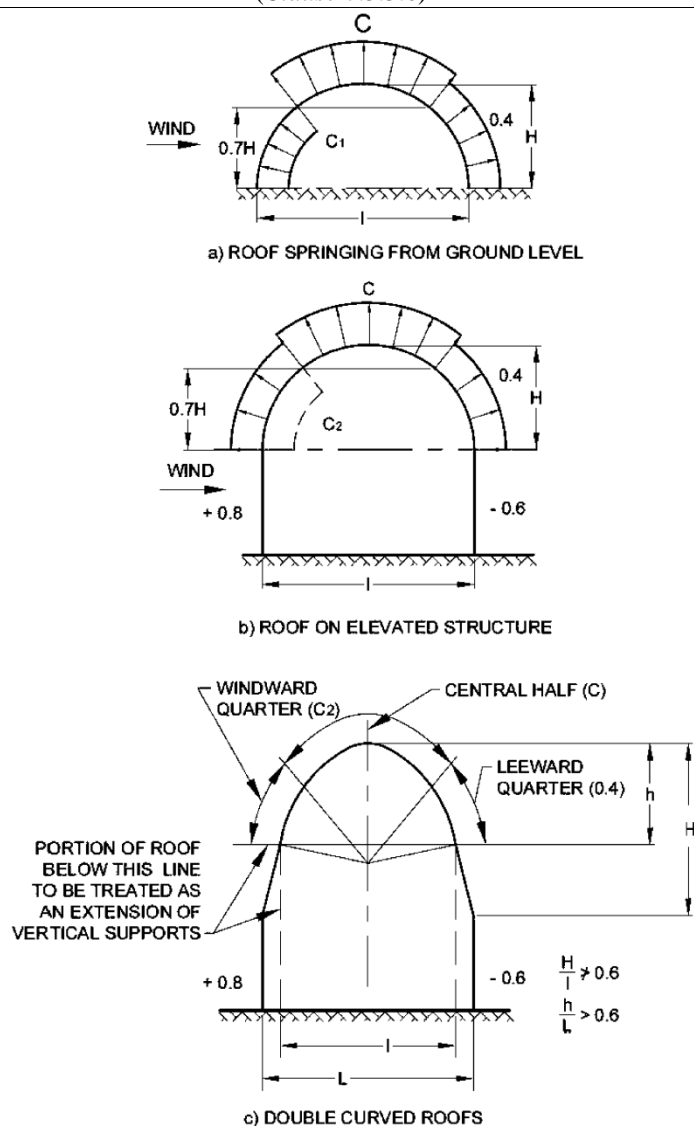
VALUES OF C, C_1 and C_2

H/l	C	C_1	C_2	C_2
0.1	- 0.8	+ 0.1	- 0.8	+ 0.05
0.2	- 0.9	+ 0.3	- 0.7	+ 0.1
0.3	- 1.0	+ 0.4	- 0.3	+ 0.15
0.4	- 1.1	+ 0.6	+ 0.4	-
0.5	- 1.2	+ 0.7	+ 0.7	-

NOTE: When the wind is blowing normal to gable ends, C_{pe} may be taken as equal to -0.7 for the full width of the roof over a length of $l/2$ from the gable ends and -0.5 for the remaining portion.

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(*Page*28, *Table* 19, *figures*) – Substitute 'D' *for*'d' in both figures.

(*Page* 31, *Table* 21, *figures,* y-axis, between 0.4 and 0.8) – Substitute '0.6' *for* '0.8'.

(*Page* 31, *Table* 21) –Substitute the following for the existing entry:

e	*See***7.3.3.5**

(*Page* 32, *Table* 22) – Substitute the following for the existing entry:

C_{pe}	-0.6	+0.7	*See* Table 21 for combined roofs

[*Page* 34, *clause***7.4.1** (a)] — Substitute the following for the existing:
'a) If $h \leq b, F' = C_f'(d - 4h)bp_d + C_f'(d - 4h)2hp_d$, and'

(*Page* 36, *Table* 25, *Title*) — Substitute '(Clause 7.4.2.1)' *for* '(Clause7.4.2.2)'.

(*Page* 39, *Fig*.5) — Substitute 'C_f = FORCE COEFFICIENT' *for* 'C_f = DRAG COEFFICIENT'.

(*Page* 39, *Table* 26) — Substitute 'FORCE COEFFICIENT, C_f' *for* 'DRAG COEFFICIENT C_f'.

[*Page* 40, *Table* 28, *Sl* No. (ii), *col* 2] — Substitute '$D\overline{V}_d \geq 6m^2/s$' for the existing information given in bracket.

[*Page* 40, *Table* 28, *Sl No*. (iii), *col* 2] — Substitute '$b\overline{V}_d \geq 6m^2/s$' for the existing information given in bracket.

(*Page* 41, *Table* 29, *Title*) — Substitute '[Clause 7.4.3.2(a)]' *for* '[Clause 7.4.3.2 (b)]'.

(*Page* 42, *clause* **7.4.3.4**, *line* 10) — Substitute 'spacing' *for* 'spac-ing'.

(*Page* 42, *Table* 30, *Title*) — Substitute the '(l/D = 100)' in the title in place '(L/D = 100)'.

[*Page* 42, *Table* 30, *Sl No*. (i) *and* (ii), *col* 2] — Substitute the following for the existing values:

(1)	(2)	(3)	(4)	(5)	(6)
i)	$D\overline{V}_d < 6$ m^2/s	1.2	1.2	1.2	1.3
ii)	$D\overline{V}_d \geq 6$ m^2/s	0.5	0.7	0.9	1.1

(*Page* 42, *Table* 31, Force Coefficient C_t for) — Substitute 'Force Coefficient, C_f for' *for* 'Force Coefficient C_t for'.

(*Page* 42, *Table* 31, *col* 1) — Substitute '0.2' *for* '02'.

(*Page* 42, *Table* 31, *col* 4, *sub-sub heading*) — Substitute 'Super Critical Flow ($D\overline{V}_d \geq 6$ m^2/s)' for the existing.

(*Page* 43, *Table* 32, *Title*) — Substitute 'η' *for* '*H*'.

(*Page* 44, *Table* 34, *sub-heading*) — Substitute 'Subcritical Flow ($D\overline{V}_d < 6$ m^2/s)' for the existing and 'Supercritical Flow ($D\overline{V}_d \geq 6$ m^2/s)' for the existing.

(*Page* 44, *clause* **8.2**, *line* 4) — Substitute '*x*' *for* '*(x)*'.

(*Page* 44, *Table* 35) — Substitute 'Subcritical Flow ($D\overline{V}_d$ <6 m^2/s) All Wind Directions' for the existing and 'Supercritical Flow ($D\overline{V}_d \geq$ 6 m^2/s) All Wind Directions' for the existing.

(*Page* 45, *Fig.*7) — Substitute 'x'*for*'X'.

(*Page* 45, *Fig.* 8, *caption*) — Substitute '(CLAUSE **8.3**)' *for* '(CLAUSE 7.3)'.

(*Page* 46, *clause* **9.2.1**, *Note* 2, *line* 1) — Substitute the following for the existing:

'2 Unlined welded steel cylindrical structures…'

(*Page* 46, *clause* **9.2.1**, *Note* 4, *line* 1) — Substitute '**9.2.1** (a)' *for* '**8.2.1** (a)'.

(*Page* 47, *clause* 10.2, *line* 14) — Substitute 'M$_a$ = $\sum$ F$_z$ z' *for* 'M$_a$ = $\sum$ F$_z$ Z'.

(*Page* 47, *clause* **10.2**, *line* 28) — Substitute '(1+ ϕ)^2' *for* '(1+g)^2' in formula of Gust factor.

(*Page* 48, *clause***10.3**, *line* 13) — Substitute '$\overline{p}_h$ ' *for* 'p_h'.

(*Page* 49, *Fig.* 10, x-axis) — Substitute '…6 8 10…' *for* '…6 6 10…'.

[*Page* 53, *Fig.*12(b)] — Substitute 'DESIGN PROFILE AT A' *for* 'OESIGN PROFILE AT A'.

[*Page* 53, *Fig.*12(b)] — Substitute 'WIND DIRECTION' *for* 'WINO OIRECTION'.

[*Page* 53, *Fig.*12(c)] — Substitute 'WIND DIRECTION' *for* 'WINO OIRECTION'.

(*Page* 54, *clause* **C-2**, *line* 6) — Substitute 'θ$_s$' *for* 'θs'.

(*Page* 54, *clause* **C-2**, *line* 9) — Substitute 'distance, X' *for* 'distance, x'.

[*Page* 54, *Fig.*13(a)] — Substitute 'REGION AFFECTED BY TOPOGRAPHICAL FEATURE' *for* 'REGION AFFECTED BY TOPOGRAHICAL FEATURE'.

(*Page* 55, *Fig.*14, *caption*) — Substitute the following for the existing caption:

FIG. 14 FACTOR s$_0$ FOR CLIFF AND ESCARPMENT'

(*Page* 55, *Fig* 15, *caption*) — Substitute the following for the existing caption:

'FIG. 15 FACTOR s$_0$ FOR RIDGE AND HILL'

(*Page* 56, *Fig.*17) — Substitute 's$_p$' *for* 'sp'.

(*Page* 56, *clause* **D-1,** *para* 7, *line* 5) — Substitute 's$_p$' *for* 'sp'.

(CED 37)